Project 2 Design Paradigm Component

Object-Oriented Design is the process of breaking down the software project into classes and getting into the details of each class to create methods, algorithms, data structures, and interfaces. Looking at the Project1 Documentation of the previous team, it becomes strikingly obvious that the Design Paradigm they used in planning their Battleship project was Object-Oriented Design. The previous team’s documentation was very detailed and organized. They took the Battleship prompt and broke it down into data that they could manipulate in four classes. This directive of looking at “real-world” problems and breaking it down into components is an aspect of Object-Oriented Programming.

The four classes the previous team used to represent the Battleship game, were Ship, Board, Game, and Player. At first, the previous team took a very top-level approach to the project, and after breaking down the problem into four components, they delved deeper and brainstormed how each component, or class in this case, would have their own sets of data structures, methods of handling data to perform each feat the class is designed for, and their own mean of communicating between each of the classes. The project1 documentation shows this in having lists of possible or created member variables under each class, as well as methods with descriptions of how they can be used, and how they function in tandem with the other classes used in the Battleship game. In terms of Object-Oriented Design terminology, the previous team focused on what kinds of data needed to be manipulated by each class to get the desired results. With these design steps that the previous team illustrated onto their task-set and methods documentation, it can be fairly deduced that Object-Oriented Design was used. The fact that they used C++, a well-known object-oriented programming language, was also a factor in that deduction.